



# Natural Heritage & Endangered Species Program

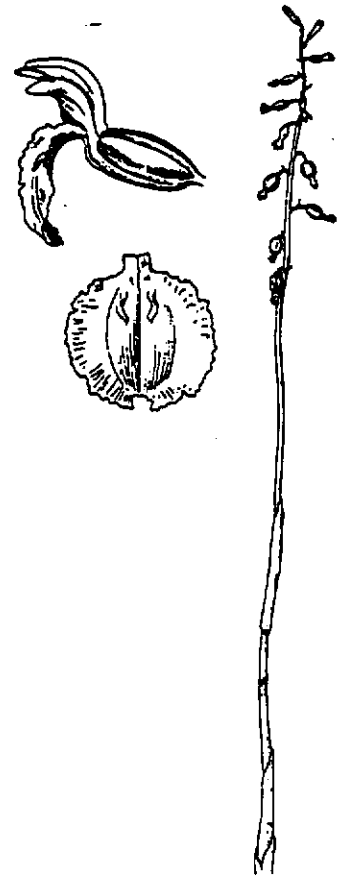
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## MASSACHUSETTS SPECIES OF SPECIAL CONCERN

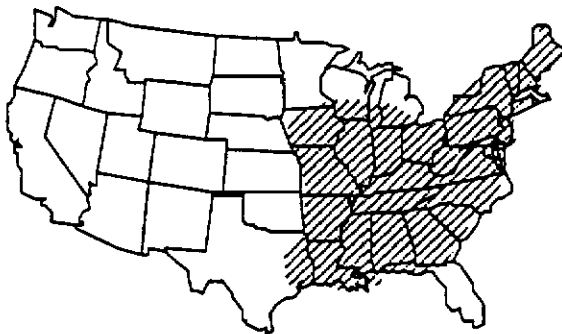
### AUTUMN CORALROOT

(*Corallorhiza odontorhiza* (Willd.) Nutt.)

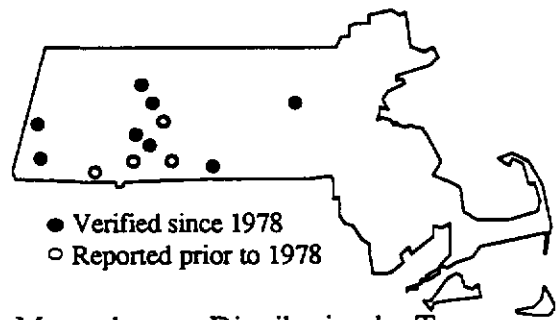
**Description:** Autumn coralroot, a member of the Orchid family (Orchidaceae), is a brown-purple saprophyte—a type of plant that obtains its nourishment from dead organic matter present in the soil rather than from photo-synthesis. It is frail and slender above, with a bulbous thickening at its base. Below ground is the branched, coral-like rhizome (underground, horizontal stem) that gives the genus its name. The 5-20 cm (2 - 8 in.) high flower stalk is erect, leafless, and hairless. The raceme (elongate, unbranched inflorescence of stalked flowers) has from 3 to 20 small blossoms, each borne on a very slender, 2-3 mm (2/25 - 3/25 in.) long, drooping stalk. The segments of the flowers spread very little but, rather, extend forward over the column (the structure formed in Orchids by the fused male and female flower parts). Both sepals and petals are dark purple or purplish green. The white "lip", or lower-most petal, is 3-4 mm (3/25 - 4/25 in.) long and is marked with a purple margin and two purple spots. Autumn coralroot blooms from early September to mid October. in Massachusetts. The root system of *C. odontorhiza*



Gleason, H. A. The New Britton and Brown Illustrated Flora of the Northeastern US & Adjacent Canada. NY Botanical Garden, 1952.



Documented Range of  
Autumn Coral root



Massachusetts Distribution by Town

gradually increases in size for several years before a flower stalk is produced.

**Range:** The documented range of Autumn Coralroot extends from southern Maine, southern Ontario and southeastern Minnesota, south to the Gulf Coast, eastern Texas and Central America.

**Similar Species:** Other species of coralroot do occur in our area and are somewhat similar in appearance. However, none blooms as late in the year as Autumn coralroot. Spotted coralroot (*C. maculata*) blooms from early July to mid August and, rarely, to late August. In addition, it is taller than Autumn coralroot--growing from 20 - 51 cm (8 to 20 in.), compared to the 5 - 20 cm (2 to 8 in.) of Autumn coralroot. Early coralroot (*C. trifida*) blooms in spring and early summer, and its sepals and petals are greenish-yellow. The parasitic, woodland plant beechdrops (*Epifagus virginiana*) blooms from August through October, is also lacking in green pigment (resulting in a purplish or yellowish brown plant), and could be mistaken for Autumn coralroot. However, the flowers of beechdrops, a member of the Broomrape family (Orobanchaceae), are tubular in shape, and the plant has many branches.

**Habitat:** In general, Autumn coralroot grows in either light soil or rich humus in open deciduous or mixed forests. In Massachusetts, it has been found in the wooded border of a brook; on a trail in an open woodland; in a rich, limey forest; in a mesic woods at the base of a talus slope; in a forested, dolomitic limestone cobble; and in an open, medium dry woods. Among the species associated with *C. odontorhiza* are white pine (*Pinus strobus*), sugar maple (*Acer saccharum*), hemlock (*Tsuga canadensis*), spice-bush (*Lindera benzoin*), black birch (*Betula lenta*), sharp-leaved goldenrod (*Solidago arguta*), and common speedwell (*Veronica officinalis*). In Massachusetts, other rare plants associated with Autumn coralroot include black maple (*Acer nigrum*), purple cliff-brake (*Pellaea atropurpurea*), large flowered bellwort (*Uvularia grandiflora*), and ginseng (*Panax quinquefolius*). Autumn coralroot occurs at elevations ranging from sea level in North Carolina to 9,000 feet in Mexico and Guatemala.

**Population Status:** In Massachusetts, the Autumn coralroot is presently listed as a "Species of Special Concern". All species listed by the state are protected by the Massachusetts Endangered Species Act, and are protected from take (picking, collecting, moving, killing...) in order to preserve the remaining populations. There are thirteen current stations (discovered or relocated since 1978) in eight towns in the Commonwealth. The species is also known from at least four historical (unverified since 1978) sites. Due to its late blooming season and small size, it is likely that many populations have been overlooked. Autumn coralroot is considered rare in Maine, New Hampshire, Rhode Island, Vermont, and six other states through its range.

**Management Recommendations:** As with most rare plants, little is known about the exact requirements needed by Autumn coralroot. In general, it is best not to disturb orchids, since they are known as a very difficult group to grow. Orchids often have an obligate symbiotic relationship with specific soil fungi, without which they do not live long or well. Threats to Autumn coralroot include ground disturbance, sedimentation, erosion, road-widening, overgrowth by shrubs, and general land development. As a plant of shade or partial shade, the canopy should not be opened near any populations.